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Version 1

1. IDENTIFICATION**Product identifier****Product Name** Sharda Bromacil 2% + Diuron 4% WDG ABN: Brahmos 24**Other means of identification****Product Code** 83529-131**Synonyms** None**Registration Number(s)** 83529-131**Recommended use of the chemical and restrictions on use****Recommended Use** Herbicide**Uses advised against** No information available**Details of the supplier of the safety data sheet****Manufacturer Address**Sharda USA LLC
P.O. Box 640
Hockessin, DE 19707
Website: www.shardausa.com**Emergency telephone number****Company Phone Number** 610-350-6930 (US)
+91 22 5678 2800 (India)
Emergency Telephone CHEMTREC: 800-424-9300
CHEMTREC: 703-527-3887
POISON CONTROL CENTER: 800-222-1222**2. HAZARDS IDENTIFICATION****Classification****OSHA Regulatory Status**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Serious eye damage/eye irritation	Category 2B
Carcinogenicity	Category 2
Specific target organ toxicity (repeated exposure)	Category 2

Label elements**Emergency Overview****Warning****Hazard statements**Causes eye irritation
Suspected of causing cancer
May cause damage to organs through prolonged or repeated exposure**Appearance** dry, free flowing granules**Physical state** Solid**Odor** Pungent

Precautionary Statements - Prevention

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Wear protective gloves/protective clothing/eye protection/face protection

Wash face, hands and any exposed skin thoroughly after handling

Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

If eye irritation persists: Get medical advice/attention

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Not applicable

Other Information

May be harmful if swallowed. May be harmful in contact with skin. Causes mild skin irritation. Toxic to aquatic life with long lasting effects. Toxic to aquatic life.

Unknown acute toxicity

0% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS**Mixture**

Chemical Name	CAS No	Weight-%
Other ingredients *	Proprietary	60 - 100
Silica, amorphous *	7631-86-9	1 - 5
Diuron	330-54-1	4.0
Bromacil	314-40-9	2.0

*The exact percentage (concentration) of composition has been withheld as a trade secret. If CAS number is "proprietary", the specific chemical identity and percentage of composition has been withheld as a trade secret.

4. FIRST AID MEASURES**Description of first aid measures****General advice**

Call a poison control center or doctor for treatment advice. Have the product containers or label with you when calling a poison control center or doctor, or going for treatment.

Eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison control center or doctor for treatment advice.

Skin contact

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before reuse. If skin irritation persists, call a physician. Call a poison control center or doctor for treatment advice.

Inhalation

Move victim to fresh air. If breathing is irregular or stopped, administer artificial respiration. Call a physician or poison control center immediately. Call a poison control center or doctor for treatment advice.

Ingestion

Call a physician or poison control center immediately. Drink 1 or 2 glasses of water. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.

Self-protection of the first aider Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

Most important symptoms and effects, both acute and delayed

Symptoms May cause redness and tearing of the eyes.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Dry chemical, CO₂, water spray or regular foam. Move containers from fire area if you can do it without risk. Dike fire-control water for later disposal. Water spray, fog or regular foam.

Unsuitable extinguishing media None.

Specific hazards arising from the chemical

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

Hazardous combustion products Carbon oxides. Nitrogen oxides (NO_x). Hydrogen chloride.

Explosion data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Cool containers / tanks with water spray.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Evacuate personnel to safe areas. Ensure adequate ventilation, especially in confined areas. Use personal protective equipment as required. Avoid creating dust.

For emergency responders Use personal protection recommended in Section 8. Ventilate the area.

Environmental precautions

Environmental precautions Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containment Prevent dust cloud. Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Avoid creating dust. Do not dry sweep dust. Wet dust with water before sweeping or use a vacuum to collect dust. Sweep up and shovel into suitable containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Do not breathe dust/fume/gas/mist/vapors/spray.

Conditions for safe storage, including any incompatibilities

Storage Conditions	Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Keep away from food, drink and animal feeding stuffs. Keep in properly labeled containers.
Packaging materials	Do not reuse container.
Incompatible materials	Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Silica, amorphous 7631-86-9	-	TWA: 50 µg/m ³ excludes construction work, agricultural operations, and exposures that result from the processing of sorptive clays TWA: 20 mppcf : (80)/(%) SiO ₂ mg/m ³ TWA	IDLH: 3000 mg/m ³ TWA: 6 mg/m ³
Diuron 330-54-1	TWA: 10 mg/m ³	-	TWA: 10 mg/m ³
Bromacil 314-40-9	TWA: 10 mg/m ³	-	TWA: 1 ppm TWA: 10 mg/m ³

NIOSH IDLH Immediately Dangerous to Life or Health

Appropriate engineering controls

Engineering Controls	Ensure adequate ventilation, especially in confined areas. And. Showers. Eyewash stations. Ventilation systems.
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Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles). Tight sealing safety goggles.
Skin and body protection	Wear suitable protective clothing. Wear protective butyl rubber gloves. Protective shoes or boots.
Respiratory protection	Ensure adequate ventilation, especially in confined areas. If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.
General Hygiene Considerations	When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Wash hands thoroughly after handling. Keep away from food, drink and animal feeding stuffs. Wash contaminated clothing before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Solid	Odor	Pungent
Appearance	dry, free flowing granules	Odor threshold	No information available
Color	red yellow		
Property	Values	Remarks • Method	
pH	7.06	solution (1 %)	
Melting point / freezing point	No information available		
Boiling point / boiling range	No information available		
Flash point	Not applicable		
Evaporation rate	No information available		
Flammability (solid, gas)	No information available		

Flammability Limit in Air

Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	0 mmHg	@ 25 °C
Vapor density	No information available	
Relative density	1.542 g/mL	
Water solubility	dispersible	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Explosive properties	Not an explosive	
Oxidizing properties	Not applicable	

Other Information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Density	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY**Reactivity**

No data available

Chemical stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to avoid

Elevated Temperature. Storage near to reactive materials.

Incompatible materials

Strong oxidizing agents.

Hazardous Decomposition Products

Thermal decomposition can lead to release of irritating and toxic gases and vapors. Nitrogen oxides (NOx). Carbon oxides. Hydrogen chloride.

11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure**

Product Information	Acute Oral LD50 (rat): >2000 mg/kg Acute Dermal LD50 (rabbit): > 2000 mg/kg Eye Irritation (rabbit): Mild irritant. Skin Irritation (rabbit): Mild irritant. Inhalation LC50 (rat): >4.32 mg/L (4 HR) Skin Sensitization (guinea pig): Not a sensitizer		
Inhalation	Based on available data, the classification criteria are not met.		
Eye contact	Moderately irritating to the eyes.		
Skin contact	Based on available data, the classification criteria are not met. Substance may cause slight skin irritation.		
Ingestion	Based on available data, the classification criteria are not met.		

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Other ingredients	= 2840 mg/kg (Rat)	> 2000 mg/kg (Rat)	-

Silica, amorphous 7631-86-9	= 7900 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 2.2 mg/L (Rat) 1 h
Diuron 330-54-1	= 1017 mg/kg (Male Rat) = 4990 mg/kg (Female Rat)	> 2000 mg/kg (Male Rat) > 5 g/kg (Female Rat)	> 0.265 mg/L (Rat)
Bromacil 314-40-9	= 691 mg/kg (Rat)	> 2000 mg/kg (Rat)	> 4.2 mg/L (Rat) 4 h

Information on toxicological effects**Symptoms**

May cause redness and tearing of the eyes.

Delayed and immediate effects as well as chronic effects from short and long-term exposure**Sensitization**

Based on available data, the classification criteria are not met.

Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Carcinogenicity

US EPA known/likely carcinogen (Diuron). This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

Chemical Name	ACGIH	IARC	NTP	OSHA
Silica, amorphous 7631-86-9	-	Group 3	-	-
Bromacil 314-40-9	A3	-	-	-

IARC (International Agency for Research on Cancer)

Group 3 - Not Classifiable as to Carcinogenicity in Humans

Reproductive toxicity

Based on available data, the classification criteria are not met.

STOT - single exposure

Based on available data, the classification criteria are not met.

STOT - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Chronic toxicity

Avoid repeated exposure. May cause adverse liver effects. May cause adverse effects on the bone marrow and blood-forming system.

Target Organ Effects

Central nervous system, liver, Thyroid, Respiratory system, blood, Eyes, Skin.

Aspiration hazard

Based on available data, the classification criteria are not met.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document .

Refer to product information above.

12. ECOLOGICAL INFORMATION**Ecotoxicity**

Toxic to aquatic life with long lasting effects

This product is toxic to fish. Drift or runoff from treated areas may be hazardous to aquatic organisms and non-target plants. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters.

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Other ingredients	-	250: 96 h Brachydanio rerio mg/L LC50 18: 96 h Cyprinus carpio mg/L LC50 123 - 128: 96 h Poecilia reticulata mg/L LC50 semi-static 460 - 1000: 96 h Leuciscus idus mg/L LC50 static 100: 96 h Pimephales promelas mg/L LC50 126: 96 h Poecilia reticulata mg/L LC50 480: 96 h Brachydanio rerio mg/L LC50 flow-through 420: 96 h Brachydanio rerio mg/L LC50 semi- static	14: 48 h Daphnia magna mg/L LC50 423: 24 h Daphnia magna mg/L EC50
Silica, amorphous 7631-86-9	440: 72 h Pseudokirchneriella subcapitata mg/L EC50	5000: 96 h Brachydanio rerio mg/L LC50 static	7600: 48 h Ceriodaphnia dubia mg/L EC50
Diuron 330-54-1	0.022: 96 h Desmodesmus subspicatus mg/L EC50 0.1: 72 h Pseudokirchneriella subcapitata mg/L EC50 static 0.0007: 96 h Pseudokirchneriella subcapitata	13.4 - 15: 96 h Pimephales promelas mg/L LC50 flow-through 13.4 - 15: 96 h Pimephales promelas mg/L LC50 static 2.3 - 3.3: 96 h Lepomis macrochirus mg/L	1.4: 48 h Daphnia magna mg/L EC50 6.3 - 13: 48 h Daphnia magna mg/L EC50 Static

	mg/L EC50 static 0.036: 72 h Desmodesmus subspicatus mg/L EC50 static	LC50 static 2.9: 96 h Cyprinus carpio mg/L LC50 14.7: 96 h Oncorhynchus mykiss mg/L LC50 4: 96 h Lepomis macrochirus mg/L LC50 1.5 - 2.54: 96 h Oncorhynchus mykiss mg/L LC50 static	
Bromacil 314-40-9	-	180 - 192: 96 h Pimephales promelas mg/L LC50 flow-through 32: 96 h Lepomis macrochirus mg/L LC50 static 30 - 40: 96 h Oncorhynchus mykiss mg/L LC50 static	-

Persistence and degradability

Not readily biodegradable.

Bioaccumulation

Not likely to bioaccumulate.

Chemical Name	Partition coefficient
Other ingredients	-5.1
Diuron 330-54-1	2.82
Bromacil 314-40-9	2.11

Other adverse effects

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT)

13. DISPOSAL CONSIDERATIONS**Waste treatment methods****Disposal of wastes**

Pesticide wastes may be acutely hazardous. Improper disposal is a violation of federal law. Disposal should be in accordance with applicable regional, national and local laws and regulations. Contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance on proper disposal of waste product.

Contaminated packaging

Disposal should be in accordance with applicable regional, national and local laws and regulations. Consult product label for additional information. Do not reuse container.

14. TRANSPORT INFORMATION**DOT**

Not Regulated (Single Container < RQ)

This product is regulated by US DOT when shipped in single containers with a net weight of 2500 lbs or greater with the following description: RQ; UN3077; Environmentally Hazardous Substance, Solid, NOS (Diuron); 9; III.

TDG

Not regulated

IATA

UN/ID no	UN3077
Proper shipping name	Environmentally hazardous substance, solid, n.o.s.
Hazard Class	9
Packing Group	III
ERG Code	9L
Special Provisions	A97, A158, A179, A197
Description	UN3077, Environmentally hazardous substance, solid, n.o.s. (Diuron, Bromacil), 9, III

IMDG

UN/ID no	UN3077
Proper shipping name	Environmentally hazardous substance, solid, n.o.s.

Hazard Class	9
Packing Group	III
EmS-No	F-A, S-F
Special Provisions	274, 335, 966, 967
Description	UN3077, Environmentally hazardous substance, solid, n.o.s. (Diuron, Bromacil), 9, III; Marine Pollutant

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDL	Complies
EINECS/ELINCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	SARA 313 - Threshold Values %
Other inert ingredients -	1.0
Diuron - 330-54-1	1.0

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	Yes
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Diuron 330-54-1	100 lb	-	-	X

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Diuron 330-54-1	100 lb	-	RQ 100 lb final RQ RQ 45.4 kg final RQ

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals

Chemical Name	California Proposition 65
Diuron - 330-54-1	Carcinogen

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Silica, amorphous 7631-86-9	-	X	X
Bromacil 314-40-9	X	X	X
Diuron 330-54-1	X	X	X

U.S. EPA Label Information**EPA Pesticide Registration Number** 83529-131**EPA Statement**

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

Difference between SDS and EPA Pesticide label

CAUTION: Harmful if swallowed. Harmful if absorbed through the skin. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA	Health hazards 2	Flammability 1	Instability 0	Physical and Chemical Properties -
HMIS	Health hazards 2*	Flammability 1	Physical hazards 0	Personal protection X
<i>Chronic Hazard Star Legend</i>	<i>* = Chronic Health Hazard</i>			

Issue Date 29-Mar-2021**Revision Date** 29-Mar-2021**Revision Note**

No information available

Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

29Mar2021